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Scarne's ENCYCLOPEDIA OF GAMES

John Scarne

HARPER & ROW, PUBLISHERS
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copy

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square and known as *razor edge* or slightly turned and known as *feather edge*. Casino dice usually carry their own special monogram and coded serial number as a means of thwarting dice cheats. Perfect dice used in various other dice games range from a .250-inch celluloid or bone "peewee" die to an extra large size .770-inch. Perfect concave-spot dice, although still in use, are rarely seen in topnotch casinos. Drugstore dice are generally used for social and board games and are all round cornered. Pyramidal dice, pentahedral dice, and octahedral dice, with all

sorts of face designs, are and have been used.

Dice in various forms are the oldest gambling instruments known to man, and countless games are and have been played with them. Craps, the most popular gambling house game, is played with two dice. In more social play there are Poker Dice and Scarney Dice, played with five dice; there are various counter and bar games, such as Twenty-Six, played with ten dice. In Backgammon and hundreds of "board games" two or more dice are thrown to determine the moves.

CRAPS

History's biggest and fastest-action gambling game, Craps is undoubtedly the most widely played dice game in the United States today. More money is won and lost at Craps every day than at any other form of casino gambling. It is of American Negro origin, as shown by the colorful slang still used in the game. (Dice are still often called "African Dominoes.") Around New Orleans, some time after 1800, the Negro tried his hand at the old English game of Hazard, which the English sometimes called Craps, or Crabs. But the intricacy of the rules led him to simplify the playing procedure so greatly that he ended up inventing the present game of Private Craps. This was the situation in 1907 when John H. Winn, a New York City dice maker by trade, became the first Craps bookmaker or banker in history. Winn invented the game of Open Craps—he did this by charging both right and wrong bettors a quarter for a \$5 bet and 50 cents for a \$10 bet. This innovation gave Winn plenty of action and other operators, noticing it, began to follow suit. Shortly afterward, Winn made Bank Craps a two-way action game by adding the Don't Pass line and charging 5 percent of the amount of any bet made against the house. Later, other gamblers eliminated the direct charge, substituted shorter house odds, and added more bets to the layout.

There are basically four ways to play Craps (a Craps game is usually referred to as "crap-shooting" or "shooting crap"), which are as follows:

Private Craps is a friendly social game that does not use a casino, Craps table, or banker. The only requisites for Private Craps are two or more persons with cash in their pockets

and a pair of dice. It can be played on a street corner, in a back alley, private club, army barracks, living room—anywhere the players have room in which to roll the dice.

Bank Craps is the version of the game found in all Nevada Casinos and in most legalized establishments throughout the world. Bank Craps is played on a specially constructed dice table of size and form similar to a billiard table. (For a description, see *The Casino Game: Bank Craps*, page 458.) Three dealers and two house employees known as *boxmen* stand at the side of the table. One of the dealers, known as a *stickman*, handles the dice and stands opposite the boxmen. Although there are other different-shaped layouts, the actual difference is small. Players are not permitted to gamble against each other; all bets are made against the house. Chips or checks are used instead of cash when wagers are placed on the layout. The layout is fixed so that the house has a mathematical advantage on every bet.

Money Craps, Open Craps, or Fading Craps is a game played with cash in which players are permitted to bet on point numbers among themselves. A houseman, called a banker or bookie, is present to accept any bet within the house limit on all other bets and to point numbers that a player is unable to place with another player. For this privilege, the player must pay the banker a charge, usually 5 percent of the amount wagered.

New York Craps is a version of Bank Craps found in gambling houses in the Eastern part of the United States, the Bahamas, and in England. The game is played on a specially constructed dice table that is similar to a Las Vegas or Bank Craps table.

However, the table and layout are somewhat different and the house employees (dealers) are posted at each end of the table. A stickman stands at the center of the table and two boxmen sit opposite the stickman. The table is known as a *double-end acquier* and the dealers take a charge of 5 percent of the amount wagered on the point numbers (4, 5, 6, 8, 9, 10).

Scarne's Official Rules for Private Craps

Requirements

1. Two dice. Each is numbered from one to six in such a way that the spots on opposite sides add to seven.
2. A wall or backboard against which the dice are thrown.

Players

1. Any number may play.
2. The player throwing the dice is the shooter. Any player, by consent of the others, may start the game by becoming the shooter.
3. A new player may enter the game at any time, provided there is an opening in the circle. If no player objects at the time he takes his position, he becomes the shooter at his proper turn (even though he may take a position directly at the left of the shooter).
4. The dice pass around the circle of players to the left—clockwise.
5. Players may leave the game at any time (without regard to their wins or losses).

The Play

1. The dice are thrown and the two numbers that face upward when the dice come to rest, added together, are the deciding numbers.
2. If on the first roll, called the *come-out*, the shooter throws a *natural* (7 or 11), it is a winning decision called a *pass*. If it is a *craps* (2, 3, or 12) it is a losing decision called a *missout*. If 4, 5, 6, 8, 9, or 10, that number becomes the shooter's *point* and he continues throwing until he:
 - (a) throws his point again, which effects a winning decision or pass; or
 - (b) throws a seven which effects a losing decision or missout.
3. The shooter's first roll after a decision has been effected is a *come-out*.
4. When the shooter misses out on the point, the dice pass to the next player on his left and it becomes this player's turn to shoot.
5. The shooter, if he wishes, may pass the dice to the next player on the completion of

any decision, without waiting to miss out on the point.

6. Any player may, if he likes, refuse to shoot his turn, and may pass to the next player.

7. When more than one pair of dice are employed, players may call for a *box-up* or change of dice at any time, the change taking place immediately after the next decision.

The Throw or Roll

1. The shooter shakes the dice in his closed hand and must try to throw them so that both dice hit and rebound from the backboard.
2. If only one die hits the board, the roll counts but the players may reprimand the shooter.
3. If this occurs a second time, the other players may designate someone else to complete the shooter's turn at throwing. If they wish, they may also bar him from shooting for the duration of the game.
4. If neither die hits the board, or if (when playing on a table or elevated surface) one or both dice fall off the playing surface, the roll is *no-dice*. It does not count and the dice must be thrown again.
5. If the dice hit any object or person after hitting the board, the roll counts. It is not *no-dice*.
6. If a die comes to rest cocked at an angle on a coin or any irregularity on the playing surface, and if there is a difference of opinion as to which number faces upward, a neutral player or any player or bystander designated by common consent shall stand at the shooter's position and decide which number counts. He does this by stating which surface of the die appears to be the top surface from that position.
7. If, after hitting the backboard, a die rolls out of sight under a bill or any other object on the playing surface, either a neutral player, a player designated by common consent, or a bystander shall take extreme care in trying to ascertain the top number.
8. The practice of knocking the dice with the hand or kicking the dice aside with a foot on the roll and then calling "Gate!" or "No dice!" (known as *gating*) is, of course, not permitted.

Betting

1. *Right Bet*. This is a wager that the dice will pass (win either by making a natural on the come-out or by throwing a point on the come-out and then repeating it before throw-

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2. *Wrong Bet*. This is a wager that the dice *don't pass*. Players making wrong bets are *wrong bettors*.

3. All bets must be made before the dice are thrown and cannot be made while they are rolling.

4. Any off-number bet (see paragraph 15) may be called off by the bettors concerned before a decision is affected.

5. *Center Bet*. Before the come-out, the shooter may (but is not required to) bet that he will pass. Players who cover this wager by betting an equal amount against the shooter, *fade* the shooter and are known as *faders*. These wagers, placed in the center of the playing surface, are center bets.

6. If only a part of the shooter's center bet is covered, the shooter may shoot for that amount or he may call the bet off by saying "No bet."

7. *Side Bet*. Any bet that is not a center bet is placed at one side of the playing surface and is known as a side bet. The shooter may make any side bet including the flat bet.

8. *Flat Bet*. This is a side bet, made before the come-out, that the dice pass or don't pass. It is the same as the center bet except that the shooter is not being faded and the bet is placed at the side.

9. *Point Bets*. After the shooter has thrown a point on the come-out, a bet made by a right bettor that the shooter makes his point is a *right point bet*. A bet by a wrong bettor that the shooter misses his point is a *wrong point bet*. A right bettor *takes the odds* on that point; the wrong bettor *lays the odds* on that point.

10. *Come Bet*. This is a bet that the dice will pass (win) the next roll, which is considered to be a come-out roll. *Example*: Suppose the shooter's point is 4 and he bets that he comes. If he throws a 7, he loses any bet he has made on the 4; but he wins the come bet because, on this bet, the roll is considered to be a come-out, and the 7 is a natural and wins. If he throws an 11, the point is still undecided but he wins the come bet. If he throws a 4, he wins the original point bet, but must continue throwing and make another 4 before throwing a 7 in order to win the come bet. If then he throws any other number (such as 6), it counts as a second point and he continues throwing in an attempt to make

either or both points before throwing a 7.

11. *Don't Come Bet*. This is a bet that the dice don't pass (lose) the next roll, which is considered to be a come-out roll.

12. *The Hard-Way Bet or Go-By Bet*. This is a bet that a specified even number (which may be either the shooter's point or an off number) will or will not be thrown the *hard way*. The hard way means with two like numbers, such as making a 4 with a double two, a 6 with a double three, an 8 with a double four, or a 10 with a double five. If the number is thrown any other way, or a 7 is thrown, the bettor loses the hard-way bet.

13. *One-Roll Bet or Come-Out Bet*. This is a bet that the shooter does or does not throw (a) a certain number in any way, (b) a certain number in a certain way, or (c) any one of a group of numbers on the next roll. *Examples*: (a) a bet that the shooter will or won't throw a 7 with any of the specific-way combinations: 1-6, 2-5, 3-4; (b) a bet that the shooter will or won't throw a 7 with one specific combination, such as 3-4; (c) a bet that the shooter will or won't throw any of the numbers in a group such as 2, 3, and 12 (craps), the group 4 and 10, the group 11 and 3, etc.

14. *One-Number Bet*. This is a bet that a certain number or group of numbers will or will not be thrown before another number.

15. *Off-Number Bet*. This is a bet, made at odds, that the shooter will or will not throw a specified number other than his point (any of the numbers 4, 5, 6, 8, 9, or 10) before throwing 7.

16. *Proposition Bet*. This term applies in Private Craps to any bet not a Point or Off-Number Bet or a Flat Bet.

17. *Two-Number Bet*. This is a bet that one of a certain two (sometimes more) numbers will or will not be thrown before a 7.

18. *Two-Roll Bet or Three-Roll Bet*. This is a bet that a certain number or group of numbers will or will not be thrown in a specified number of rolls.

Strategy at Private Craps. There is little to skillful play in Private Craps other than knowing the correct odds concerned in the various bets, and not accepting sucker bets (bets that offer the player unfavorable odds). However, there is one unfavorable bet that even the best-informed players make and that is a right center bet, which has a 1.414 per cent disadvantage, or odds of 251 to 244.

against the shooter. Many Craps players, knowingly or unknowingly, seem to enjoy suffering this disadvantage. But if you continue to buck that 1.414 percent, you are bound to lose.

The following are several odds tables relating to Private Craps that, if memorized, will surely help to improve your Craps shooting knowledge.

ODDS AGAINST PASSING ON THE POINTS

The Points	Odds
4 can be made in three ways; 7 in six ways	2 to 1
5 can be made in four ways; 7 in six ways	3 to 2
6 can be made in five ways; 7 in six ways	6 to 5
8 can be made in five ways; 7 in six ways	6 to 5
9 can be made in four ways; 7 in six ways	3 to 2
10 can be made in three ways; 7 in six ways	2 to 1

ODDS AGAINST PASSING THE HARD WAY

The Points	Odds
4 can be made with 2-2 in one way	8 to 1
10 can be made with 5-5 in one way	8 to 1
6 can be made with 3-3 in one way	10 to 1
8 can be made with 4-4 in one way	10 to 1

ODDS ON ONE ROLL OR COME-OUT BETS

Numbers	Odds	Numbers	Odds
Any pair	35 to 1	6	6½ to 1
11	17 to 1	8	6½ to 1
Any crap	8 to 1	Any 7	5 to 1
5	8 to 1	1-2 (3)	17 to 1
9	8 to 1	3-4 (7)	17 to 1
4	11 to 1	5-2 (7)	17 to 1
10	11 to 1	6-1 (7)	17 to 1

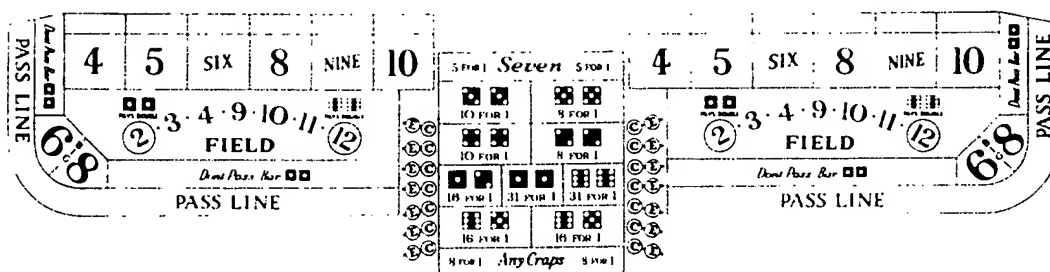
The Casino Game: Bank Craps

Bank Craps not only has replaced Faro as the great American banking game in this country, but it also has outdistanced all the other casino games in popularity. One reason is that it offers the players a greater chance of

participation. In Roulette and Chuck-A-Luck, the croupier spins the wheel or the cage; in Chemin-de-Fer and Blackjack, the dealer turns up the cards. But in Craps the player has the opportunity of trying to change his luck by throwing the dice himself. The thrill he gets when he wagers his bet against that of the others is of a more personal kind than the one he gets when he simply waits and hopes that the ball will drop into his number or that the card he wants will turn up.

The basis of Bank Craps, from the shooter's point of view, is the same as the private game. That is, the shooter makes a bet that he'll pass or win. The shooter wins immediately if on the come-out he rolls a 7 or 11; he loses immediately if on the come-out he rolls a 2, 3, or 12. If on the come-out he doesn't roll a natural or a crap, and instead rolls either 4, 5, 6, 8, 9, or 10—whichever of these he rolls now becomes his "point" and he continues rolling until he either wins by rolling his point once again, or loses by rolling a 7. Remember that the shooter retains the dice as long as he continues to roll naturals and craps and *make points*. When he rolls a 7 while trying for a point, he loses the dice, and the shooter to his left becomes the next shooter. This person may decline to shoot the dice; then the person to his left becomes the next shooter, and so on. But, before you can consider yourself a Bank Craps player, you must know the different wagers and payoff odds that may be made at the dice table. And so let's take a look at the dice table itself.

The table is about the size of a standard pool or billiard table, with a ten-inch upright wooden rail running around the table's outside edges, forming a rectangular enclosure. The rail serves as a backboard, and also helps to prevent the rolling dice from falling off the table. The rail opposite to the boxmen's seat-



The Scarne Bank Crap layout created by the author and first introduced in the Curaçao Hilton Hotel Casino in the Netherlands Antilles. The center portion shows the letters C-E. They stand for Crap and Eleven.

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ing position is fitted with a nine-inch by six-foot mirror. This is a protection device to help spot misspotted dice that a cheat may have introduced into the game. The mirror permits the boxmen to see five sides of each die while it is resting on the table layout.

Modern dice tables have grooves running around the top edges of the rail. The grooves are for the players to place their chips so that they do not clutter up the table's playing surface. The inside of the four-sided rail is lined with sponge rubber, embossed in various patterns to ensure that the dice rebound in a random manner. Gambling-house operators, well aware that there are nimble-fingered players who have spent years mastering the art of making honest dice roll in a predetermined manner, insist that everyone—including any shooter suspected of trying to control by sliding one or both dice across the center of the table—must throw the cubes so that they strike the rubber-covered backboard and bounce at random before coming to a stop.

The five men required to run a dice table include three dealers and two boxmen. The boxmen, the men who sit in-between the two dealers at the table's center, are the bosses. Their duty is to keep their eyes on everything—dice, money, chips, players, dealers, and so on. Two of the dealers stand on each side of them. After each dice decision, the dealers take in the losses and pay off the winnings. The third dealer, who stands opposite the boxmen, has charge of the dice. He calls out the dice numbers as they are made and helps with the proposition bets when placed. He is often referred to as the "stick-man" because he retrieves the dice after each roll with a curved stick and holds them until such time as all previous bets have been settled and new bets are made. Whereupon, with the stick, he pushes the dice toward the shooter.

The table's surface is covered with a tight-fitting green baize cloth on which are printed two exact large-sized designs separated at the table's center by another large design allocated for various side bets. The purpose of the duplicate designs is to accommodate more players and to permit them to make their bets without leaning forward too far or leaving their places at the table. Because of these duplicate layout designs, the Craps table itself is called a *double-side dealer*. Each of these designs is divided into spaces, of different

shapes and sizes, representing the various bets that can be placed against the house. This green baize table covering is known as a *Craps layout*. Although there are numerous differently shaped layouts, the actual difference is small. Some layouts may carry one or two wagers that others don't have; some may differ more or less in the odds offered. This last variation depends directly upon the players who patronize that particular casino—how much they know about dice odds and how much of a house percentage they will stand to buck. The smarter the patronage, the better the odds approach the correct ones; the less they know, the greater the house percentages.

All Craps layouts are clever exercises in mathematics, designed to give the player an exciting run for his money—and at the same time to give the house a mathematical edge on every bet shown on the layout. Unfortunately, the majority of Craps players know little or nothing about the house percentages they are fighting, and this lack of knowledge puts them in the chump, or sucker, category. The following odds and percentages will tell you how to stop being a chump and become as gambling-wise as the most seasoned dice gambler found in Las Vegas or anywhere else.

Before we begin our analysis of Bank Craps odds and percentages, you must remember that if you become a habitual crapshooter, you will lose, no matter how smart you bet. It makes no difference in the long run whether you make bets having less than 1 percent against you or whether you place bets that have a big 16 2/3 percent going against you. Over a long period of play, the house's percentage is bound to take both the smart dice player and the chump. The only difference is that the chump doesn't have even a fighting chance—he gives his money to the house.

Line Bets. There are two different types of line bets: the *pass line bet* and the *don't pass line bet*. Each bet can be made only before a come-out roll. After the come-out, they cannot be withdrawn. First to be discussed is the pass line bet.

Pass Line (also referred to on different layouts as "Pass," "Line," "Win," or "Do"). The player who wants to bet the house that the shooter will win—that the dice will pass—places his chip or chips, before the come-out, on the long narrow space of the

layout printed with any of the following words: *Pass Line*, *Pass*, *Line*, *Win*, or *Do*.

This bet is without a doubt the most popular bet made by dice players in the Craps table, because it's the bet they first learned when shooting *Private Craps*. The house pays this bet off at even money (1 to 1) and enjoys a favorable edge of 1.414 percent, or about 7 cents on a \$5 wager. Owing to the house's low percentage take, this is one of the wisest casino bets a player can make. But most Craps players are attracted by other bets that pay off at bigger odds; and because they don't know odds, they don't know they are fighting greater house percentages. Like all bets placed on the Craps layout, this wager can be made by any player whether he is the shooter or not; however, it cannot be withdrawn: it remains until it's won or lost.

Don't Pass Line (also referred to on different layouts as either "Don't" or "Lose"). The player who wants to bet that the shooter will lose—that the dice will not pass—places his chip or chips, before the come-out, on the small corner layout space marked with the words *Don't Pass*, *Don't*, or *Lose*. The house pays off at even money (1 to 1). If you were to make this bet in a private or noncommercial crap game, you'd have an advantage for, as I told you above, the shooter has a 1.414 percent disadvantage. Remember, however, that you are not playing in a private crap game—you're playing in a gambling casino. And casinos wouldn't stay in business long if they took a beating of 1.414 percent. The casino resorts, therefore, to a simple tactical maneuver: It bars either the double sixes (or the double aces) on the come-out roll. This means that if, on the come-out, the shooter throws a double six (6-6) or a double ace (1-1), as the case may be, your bet is a standoff: there is no action for the player or players who have placed bets on the spaces of the layout marked *Don't Pass*, *Don't*, or *Lose*. In a private or noncommercial game of Craps, the fader or wrong bettor would have won the bet; but at the Bank Craps table, it is no decision or "standoff" for the don't bettor. By barring the two sixes or the two aces and counting a standoff as a neutral roll in this bet, the house is taking away the 1.414 percent edge you would have had, and has replaced it with a house advantage of 1.402 percent or about 7 cents on a \$5 wager. If a standoff is counted as a roll the house advantage

becomes 1.364 percent. So, for all practical reasons, it doesn't matter whether you bet the pass line or don't pass line; the house percentage remains about the same. However, because this wager has a standoff, players think erroneously that it has a much higher house percentage than it actually does—hence you'll seldom find many players betting the don't pass line. If the house bars the double aces instead of double sixes, as some do, it gets the same results as if it were barring two sixes. When some houses bar the ace-deuce (1-2) instead of the double six or double one (ace), the 4.385 percent in its favor has not merely doubled—as so many dice players think—it has more than tripled! When you see a layout that bars the ace-deuce, forget that the don't pass line exists.

Come and Don't Come. The player who wishes to bet on the come or don't come places his bet on the spaces of the layout marked *Come* or *Don't Come*. These bets are put there to help speed up the line action because, even if a shooter is trying for a point number, a bettor can put his money on the layout and bet as he would on the come-out. The come bet is essentially the same as the pass line bet, and the don't come bet mimics the don't pass bet, except that the come and don't come bets are made after the come-out. Both are paid off at even money, and the house percentages on these wagers are the same as on pass line bets and don't pass line bets. The house edge is 1.414 percent, or about 7 cents on a \$5 wager, on the come; and 1.402 percent, or about 7 cents on a \$5 wager, on the don't come.

If you put a chip on the space of the layout marked *Come*, then the first roll of the dice is the point number as far as you're concerned. For example, the shooter is trying to make his point, which happens to be 8. You make a come bet, and on the next roll the shooter throws a 5, your point number if 5. In every subsequent roll of the dice, your come bet stands until either a 5 is made and you win, or a 7 is made and you lose. This also holds true for the don't come bet and the don't pass bet—even to the bar on the two sixes or the two aces. Come or don't come bets, like line bets, cannot be withdrawn; they remain until they are won or lost.

Free Odds Bets. The smart dice player ("do bettor") can slice down the house's edge of 1.414 percent on the pass line bets and

come bets to 1 odds that the number. When or come bet, come out on 2 allowed to make the amount of come, that the number. This meaning that odds that the The true or c ber are as foll

ODDS AGAIN

The Point Numbers

4 or 10
5 or 9
6 or 8

Let's say the pass line, rolls a 4; the correct odds point are 2 odds," you layout direct wager. If the pays you \$2 your original

When you line, it's always odds on the 1.414 percent pass line bet exact, .848 of the few line, remember to "lay the don't pass line the point is on the don't the odds the and you can to \$20. When bet, you are line bet. But don't pass line that could than your make the p each of your vantage on than 1 percent

come bets to less than 1 percent by taking the odds that the shooter will make his point number. When you have made a pass line bet or come bet, and the shooter already has come out on a point or a new number, you're allowed to make a free second bet, limited to the amount of your wager on the pass line or come, that the shooter will make his point number. This is called "taking the free odds," meaning that the house will give you the true odds that the shooter won't make the point. The true or correct odds on each point number are as follows:

ODDS AGAINST MAKING THE POINT NUMBERS

<i>The Point Numbers</i>	<i>Correct Odds</i>	<i>Correct Payoff Odds in Dollars</i>
4 or 10	2 to 1	\$2.00 to \$1.00
5 or 9	3 to 2	\$1.50 to \$1.00
6 or 8	6 to 5	\$1.20 to \$1.00

Let's say that you have a \$10 bet riding on the pass line, and on the come-out the shooter rolls a 4; the above chart reveals that the correct odds against the shooter making this point are 2 to 1. If you want to "take the odds," you place an additional \$10 on the layout directly behind your \$10 pass line wager. If the shooter makes the 4, the house pays you \$20 for the second bet plus \$10 for your original pass line bet.

When you have a bet riding on the pass line, it's always advantageous to take the free odds on the point, since this reduces the 1.414 percent the house originally had on the pass line bet to less than 1 percent (to be exact, .848 percent). However, if you are one of the few players who do bet the don't pass line, remember that the house will allow you to "lay the odds" on the point equal to your don't pass line bet or don't come bet. Suppose the point is 4 again and you have \$10 riding on the don't pass line. Also, you want to lay the odds that the shooter will not make it, and you can put down any even amount up to \$20. When you take the odds, on a pass bet, you are limited to the amount of your line bet. But when you lay the odds on a don't pass bet, you are limited to the amount that could give you winnings of not higher than your original bet. If the shooter fails to make the point, the house pays you \$10 for each of your two winning bets. The house advantage on both these wagers also runs to less than 1 percent (to be exact, .832 percent).

The free odds bets made on the pass line, don't pass line, come, or don't come, may be taken down (removed) at any time before the bet is decided. One thing should be remembered, however: The lowest-valued chip in a luxury casino is a \$1 chip and, for that reason, dealers cannot pay off on any part of a dollar. Therefore, when you're taking the free odds, make sure that your bet doesn't pay off in cents. For example, if your pass line bet is \$1 and the point is 5, taking the free odds for \$1 would hurt you rather than benefit you. The dice dealer would not pay you the \$1.50 your bet should bring; rather, you would be paid one lone \$1 chip—that's all. To receive the correct odds of 3 to 2, your pass line bet should be \$2.

The only way to take full advantage of the free odds is to make your bet a minimum (or multiple) of ten (\$10). Since the average pass line bettor usually bets only a buck or two, he cannot take full advantage of the free odds. Here's why: When you make your pass line bet, you don't know what the come-out number will be. If you bet \$1, and the come-out is 4 or 10, you're all right because you can get the full 2-to-1 odds. If the come-out is 5, 6, 8, or 9, you're in trouble. You'd get \$1 to \$1, instead of \$1.50 to \$1, on the 5 or 9. You'd get even money, instead of \$1.20 to \$1, on the 6 or 8. Similarly, on every bet up to \$10, you'd be blocked from getting full odds on one or another number. But, on a \$10 bet, you can get 2 to 1, 3 to 2, or 6 to 5, depending on the come-out number. This is true of any multiple of ten, but not of any other number or multiple. You can figure it yourself. This does not mean that you have to bet \$10. With a smaller bet you can still find free odds on some numbers, though not all.

If you happen to be in a situation like that just described and the Craps dealer tries to induce you to increase the amount of your pass line bet after the come-out by telling you that it is to your best advantage, since it will permit you to take full advantage of the free odds offered, *don't*. Acceptance is to take even money instead of odds that the shooter will make his point and the free odds bet is no longer free. Although "betting the line" and taking or laying the free odds as described is the smartest way of gambling at casino dice tables, it is strange how very, very few gamblers take full advantage of such a play. I have found that many players are just

as unpredictable as the dice. During the thrill, action, and excitement of the game, they bet as their emotions, rather than their minds, dictate. They follow their intuition rather than their knowledge of the game, and seldom do the right thing at the right time.

Place Bets. Now we come to two spaces of the layout exactly similar in design, and with each situated nearest the dealer. Each design depicts six large boxed numbers that read 4, 5, 6, 8, 9, 10. These are called *place numbers*, and are similar to the free odds bets previously discussed, such as taking or laying the odds that the shooter will or will not throw a given number or numbers before making a 7. Most gamblers don't bet the place numbers until after a come-out. However, place bets can be made at any time, and withdrawn

whenever desired.

The two major differences between a free odds bet and a place number bet are that, when you bet a place number, you don't have to make a line bet first and, unlike the free odds bet, you may bet one or all six place numbers at any time before the next roll of the dice. But, for this privilege, the house charges you a percentage fee for each and every place bet you make.

The house extracts its percentage by paying off place bets at less than the correct odds, instead of charging a fee. The following chart gives you the house payoff odds, the correct odds, and the favorable house advantage in terms of percentage and money, on all the possible place bets that can be made at Bank Craps:

BANK'S FAVORABLE PERCENTAGES ON RIGHT AND WRONG PLACE BETS

<i>House Payoff Odds</i>	<i>Correct Odds</i>	<i>Percentage in House's Favor</i>	<i>House Percentage on \$5 Bet</i>
House lays 9 to 5 on 4 or 10	10 to 5	6.666	About 33 cents
House lays 7 to 5 on 5 or 9	7½ to 5	4.000	About 20 cents
House lays 7 to 6 on 6 or 8	6 to 5	1.515	About 8 cents
.....			
Player lays 11 to 5 on 4 or 10	10 to 5	3.030	About 15 cents
Player lays 8 to 5 on 5 or 9	7½ to 5	2.500	About 12 cents
Player lays 5 to 4 on 6 or 8	6 to 5	1.818	About 9 cents

Obviously the best place bet is to take the 7 to 6 odds on the 6 or 8, since the house's favorable advantage is 1.515 percent, or about 8 cents on a \$5 bet. However, most inexperienced players, as you'll learn later, insist on putting their money on the big 6 or big 8, which returns only even money, thus costing 9 1/11 percent, or about 46 cents on the same wager. This is a perfect example of foolish betting at the dice table.

Most luxury casinos on the Las Vegas Strip, in addition to permitting place bets, also allow players to "buy the numbers." In buying the numbers, the player is paid off at correct odds, such as 6 to 5 on 6 or 8; 3 to 2 on 5 or 9; and 2 to 1 on 4 or 10. However, for such services, the bank levies a direct charge of 5 percent payable in advance on the total sum wagered; this amounts to a charge of \$1 on each \$20 bet, which happens to be the minimum bet permitted at Strip casinos where bets of this type are allowed. Buying

the numbers is favored by dice gamblers hailing from New York, New Jersey, and other Eastern states, but it is only recommended on the 4 and 10.

A number of casinos in this country and the Caribbean Islands operate their Bank Craps tables by compelling players to buy the numbers. Place bets, come and don't come bets, and free back-line bets (see page 460) are not permitted. The most notable casino of this kind is the plush El Casino in Freeport, Grand Bahama. This type of game is known as New York Craps. There is one very peculiar fact about the direct 5 percent charge: In most games, the house's favorable percentage is greater than most players think, but the 5 percent charge at New York Craps is less than nearly all crap players and most casino operators suspect. Here are the correct percentages in favor of the house when the operator levies a 5 percent charge:

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when taking \$20 worth of odds on the numbers 4, 5, 6, 8, 9, and 10.

2. The don't bettor pays \$1, or 2.439 percent, when laying odds of \$40 to \$20 on the numbers 4 or 10.

3. The don't bettor pays \$1, or 3.125 percent, when laying odds of \$30 to \$20 on the numbers 5 or 9.

4. The don't bettor pays \$1, or 4 percent, when laying odds of \$24 to \$20 on the numbers 6 or 8.

In Bank Craps games that permit a player to make a place bet or buy the numbers at 5 percent, it would be to a player's advantage to buy the 4 and 10 and place the 5, 9, 6, and 8.

It soon becomes clear that once you've learned the basic rules of Bank Craps, the bets that may be made on the Craps layout aren't at all difficult to understand. The trouble with the average player lies not in not knowing how to play the game, but in knowing little or nothing about odds and the house percentages he is out to beat. As a result, in a game where he has an opportunity to slice the house edge down to less than 1 percent, as explained in the foregoing, he insists on making all sorts of ridiculous side bets where at times he's bucking a house edge as high as 16 2/3 percent. Side bets are called "proposition bets" by casino operators. I call them by their right name: "sucker bets."

Let's analyze some of these ridiculous bets favored by many dice players, starting with field bets.

Field Bets. Many of the Craps players whom I have observed playing Bank Craps are suckers for field bets. The Craps stickman begins to sell the field bets by chanting constantly during the game: "Place your bet on the field. Nine, that's a field number. Ten, another field number." Then, occasionally, he adds that the field has seven winning numbers and only four losing numbers. The field usually bears the numbers 2, 3, 5, 9, 10, 11,

and 12. When the player puts the bet on the space of the layout marked *Field*, he is betting that one of the group of seven numbers listed there will be thrown on the next roll. The bank pays even money. Since the field shows seven numbers, and there are only four (4, 6, 7, and 8) that can make him lose, the non-thinker figures that his chances are excellent. He may even believe that he has the best of it, or at the very least, an even chance. But appearances are nearly always deceptive, especially in casino games. If we add together all the ways in which the winning and losing numbers can be thrown, we find that the above field numbers can be made in only 17 ways as against 19 ways for the losing numbers. The house, consequently, has an advantage of 5 5/9 percent, or about 28 cents on a \$5 bet.

Other layouts are made with the 4 in place of the 5, so that the field bears the numbers 2, 3, 4, 9, 10, 11, and 12. Some layouts pay double on 2 and 12; others pay 3 to 1 on 2. In each case, the player's disadvantage is still 5 5/9 percent or about 28 cents on a \$5 bet.

The lure of Craps is its fast action. But, because wagers on the field are either won or lost every time the dice are rolled, the action is so fast and furious that most players' bank-rolls can't take it. With the 5 5/9 percent grinding away and taking 1/18 of every bet you make, the house can expect to eat up the amount of your wager in 18 rolls. To show what this means in dollars and cents, let us assume you place 180 field bets of \$10 each, which you can do in an hour's time at many fast-action Craps tables, and let us assume that the law of averages works according to expectation. This hour of field betting would cost you exactly \$100. It's a cinch that the field bettor who believes that his chances of winning are excellent has not looked at the following chart, which shows all the 36 possible combinations that can be made with two dice:

36 COMBINATIONS OR WAYS WITH TWO DICE

2 can be made in one way:	1-1					
3 can be made in two ways:	1-2	2-1				
4 can be made in three ways:	1-3	3-1	2-2			
5 can be made in four ways:	1-4	4-1	2-3	3-2		
6 can be made in five ways:	1-5	5-1	2-4	4-2	3-3	
7 can be made in six ways:	1-6	6-1	2-5	5-2	3-4	4-3
8 can be made in five ways:	2-6	6-2	3-5	5-3	4-4	
9 can be made in four ways:	3-6	6-3	4-5	5-4		
10 can be made in three ways:	4-6	6-4	5-5			
11 can be made in two ways:	5-6	6-5				
12 can be made in one way:	6-6					

When we know that there are 36 ways of making the 11 numbers, and also how many ways each number can be made, we can easily obtain the true odds and house percentages on most bets made at Bank Craps. The general rule for figuring dice percentages is simply this: The house's favorable percentage is the number of ways that the player is short divided by the total number of ways the event can happen. In the field above, the house has 19 ways to the player's 17. The player is short two ways. Divide 2 by 36 and you get a favorable house advantage of 5 5/9 percent.

The Big 6 and the Big 8. The player who places his bet on the spaces of the layout marked *Big 6* or *Big 8* is wagering that the number will be thrown before a 7. He can put his money on that space at any time. The bank pays even money, and most players labor under the impression that it is an even-money bet. The 6 and 8 spaces on most layouts are usually made large and are positioned where the players can reach them easily. Why any gambler should think that the bank would emphasize a bet that gives the house no percentage at all is a mystery.

We know from our combinations and ways table that, since either 6 or 8 can be made five ways and 7 in six ways, the correct odds are 6 to 5, or \$1.20 to \$1.00. The house's advantage is 9 1/11 percent, which amounts to about 45 cents on a \$5 bet. The 6 and 8 spaces on most layouts have grown large and have come to be known as the big 6 and big 8 not because they are the best bet on the layout—but because the house has such a big edge. They are strictly sucker bets.

Smart-money gamblers wouldn't touch such a bet with a ten-foot pole—especially when they know they can place the 6 and 8 and get far better odds. Again, why many dice players insist on putting their money on the big 6 or big 8 and pay a whopping house percentage of 9 1/11 percent or 46 cents on a \$5 bet, when they can just as easily place the 6 or 8 and pay a low house percentage of 1.515 percent or about 8 cents on a \$5 bet, is to me another perfect example of foolish betting.

Hard-Way Bets. Another ridiculous type of side bet is to wager on one of four spaces in the center of the layout headed by the words *Hard Way*. This is to bet that the shooter will make a specified even number (4, 6, 8, or 10) with two double numbers (the hard way) before it is made the "easy way" (any other

way than a hard way) or before a 7 is made. Hard-way bets can be made at any time and withdrawn at any time.

Hard-way wagers can be found on all layouts and, once again, many dice players believe that the odds offered by the bank are fair enough. Some even think they are getting correct odds, a lack of logic that almost classes as not thinking at all!

The layout does not offer correct odds on any of these bets; further, in many cases, it offers even less than it appears to. This *misdirection*, as gamblers call it, is accomplished by wording the Craps layout so as to mislead players who forget that the two little words "for" and "to" do not mean the same thing. You will see how this deception operates in the following analysis of the hard-way wagers: The 4 (2 and 2) and 10 (5 and 5) pay 7 to 1; the 6 (3 and 3) and 8 (4 and 4) pay 9 to 1. The correct odds on a hard-way 4 or 10 are 8 to 1; and on a hard-way 6 or 8, the odds are 10 to 1. Thus, the house has a 9 1/11 percent, or about a 45-cent, edge against the player who bets \$5 on the hard-way 6 or 8; and an 11 1/9 percent, or about a 56-cent, edge against him when he bets \$5 on the hard-way 4 or 10.

Some of the smaller casinos pay only 6 to 1 on the hard 4 and hard 10, and 8 to 1 on the hard 6 and hard 8—only, it doesn't look that way. The following example shows how this misdirection is achieved: The Craps layout is made to read "7 for 1" above the hard 4 and hard 10, and "9 for 1" above the hard 6 and hard 8. The difference is this: When paying off at 7-for-1 odds, the house keeps the \$1 you bet. Some of the larger casinos make use of this same gimmick to mislead players in believing they are getting larger odds by having their layout read "8 for 1" on the hard 4 and the hard 10, and "10 for 1" on the hard 6 and hard 8.

Many dice players with whom I've discussed the hard-way bets find it difficult to understand why the player gets 9-to-1 odds on the hard 6 and hard 8 and only 7-to-1 odds on the hard 4 and hard 10. These players believe that it is just as easy to make a double 3 as it is a double 5 and that the odds should therefore be the same against making either 6 or 10 the hard way. They see no reason why, if the house pays 9 to 1 against throwing a double 4 or a double 3, it shouldn't also pay 9 to 1 against throwing a double 5 or a double 2.

The fallacy of reasoning is that it is just double 4 as you forgets that Suppose you can make it are, according and ways, 2, 1 and 3, and 1 is there but since you lose the bet two ways lose if you to make 7 you can lose you can win. C The same the point 1.

Let's try and 8. The and ways Betting on only one of the other six ways to lose odds, then players who 1. The same with 4 and ing his point bets on the before the wants the "All bets go" want the "All bets go" the come-

One-Roll we come that can be "one-roll" may appeal money game Gamblers and those bets the way bet, these throw, of specific number rolled, another roll.

1. 12 (pays 30 to

The fallacy in the average gambler's reasoning is that, when he makes the statement that it is just as easy to throw a double 3 or a double 4 as it is a double 2 or a double 5, he forgets that he is talking about the hard way. Suppose your point is 4 and you bet that you can make it the hard way with 2 and 2. There are, according to our table of combinations and ways, three ways to make 4: with 2 and 2, 1 and 3, and 3 and 1. If either 1 and 3 or 3 and 1 is thrown, you have made your point; but since you didn't make it the hard way, you lose the bet. You have one way to win and two ways to lose. In addition, you can also lose if you 7 out; and since there are six ways to make 7, there are altogether eight ways you can lose as against one way in which you can win. Consequently, the odds are 8 to 1. The same reasoning also applies to making the point 10 with 5 and 5.

Let's try the same process with points 6 and 8. The 6, according to the combinations and ways table, can be made in five ways. Betting on the 6 the hard way means that only one of these ways (3 and 3) wins and the other four lose. Add to those the losing six ways that 7 can be made, and you have 10 ways to lose against one way to win. The odds, therefore—strange as it may seem to players who don't think logically—are 10 to 1. The same reasoning applies to making 8 with 4 and 4. Once a shooter passes by making his point number, all remaining undecided bets on the layout must be called "on or off" before the next come-out throw. If the bettor wants the come-out throw to count, he says, "All bets go on the come-out." If he does not want the come-out throw to count, he calls, "All bets off on the come-out," which means the come-out throw does not count.

One-Roll Bets or Come-Out Bets. And now we come to the last of the foolish side bets that can be made on the Craps layout: the "one-roll" or "come-out" bets. Strange as it may appear, these bets are made by smart-money gamblers and chump players alike. Gamblers who like their action fast and sweet and those who like their odds big go for these bets the way Reds flock to riots. Like the field bet, these bets are wagered in one roll, or throw, of the dice. The player bets that a specific number will be made. The dice are rolled, and the bet is won or lost on that roll.

1. 12 (double 6) in one roll: The house pays 30 to 1. Since the correct odds are 35 to

1, the house has an edge of $13 \frac{8}{9}$ percent or about 69 cents on a \$5 wager. When the house pays 30 *for* 1, it has an edge of $16 \frac{2}{3}$ percent, or about 83 cents on a \$5 wager.

2. 2 (two aces) in one roll: The house odds and percentages are the same as for double 6.

3. 11 (5 and 6) in one roll: The house pays 15 to 1. Since the correct odds are 17 to 1, the house has an edge of $13 \frac{8}{9}$ percent or about 56 cents on a \$5 wager. When the house pays 15 *for* 1, it has an edge of $16 \frac{2}{3}$ percent or about 83 cents on a \$5 wager.

4. 3 (1 and 2) in one roll: The house odds and percentages are the same as for 11.

5. All 7's (3 and 4, 5 and 2, or 6 and 1) in one roll: The house pays either 5 *for* 1 or 4 to 1. Since the correct odds are 5 to 1, the house has an edge of $16 \frac{2}{3}$ percent, or about 83 cents on a \$5 wager, which makes this and the four bets described above the biggest sucker bets found on the Bank Craps layout.

6. Any craps (2, 3, or 12) in one roll: The house pays 8 *for* 1 or 7 to 1. Since the correct odds are 8 to 1, the house has an edge of $11 \frac{1}{9}$ percent, or 56 cents on a \$5 wager.

Insurance Bets. Many crapshooters have a habit of making two wagers simultaneously in an attempt to insure one or the other. *Example:* A player places a bet on the pass line, and tries to protect it against a craps on the first roll by making a come-out bet on all craps. He thinks that if he loses one bet he may win the other, thus cutting down or cancelling out his loss; actually, he stands to lose at least one of the bets and maybe both. Or he may attempt to insure a don't pass line bet after the come-out by taking odds on the point. Since every wager in Bank Craps must be considered as a separate and distinct wager, the only effect of insurance betting is simply to pay the house a toll on two bets rather than on one. Instead of insuring himself against loss, the player has merely increased the percentage against himself.

How to Gamble Sensibly at Bank Craps. As in any banking game, the house earns a percentage on every bet made at Bank Craps. This is not unreasonable because somebody has to pay for the casino rent, equipment, employees' salaries, etc. But just how much you pay for the privilege of shooting Craps in a casino is entirely up to you. Nobody can tell you how to win at Bank Craps because, if

you gamble long enough and often enough, the house percentage will take its toll. But if you still insist on taking a fling at the dice tables, here are several rules to follow which can save you money.

1. Whenever you gamble at Bank Craps, set aside in advance the amount of money you are willing to lose. If you lose that amount, quit the game for the evening; do not borrow money, write a check, or obtain credit to continue gambling.

2. Also set for yourself a reasonable amount that you might expect to win, and if you succeed in winning that much, quit the game, no matter how lucky you feel. If you follow this rule you will retain your winnings more often, and you will have more winning plays because you are trying to win smaller amounts.

3. If you lost yesterday, do not gamble today with the object of recouping yesterday's losses. That is the most dangerous course any

gambler can follow. Trying to get even has sent more players to the poorhouse than anything else. Write off yesterday's losses and forget them.

4. Naturally, I expect that after reading this text on Bank Craps you will place your bets on the layout spaces which have the least percentage against you. If you follow this rule, your chances of winning are greatly increased.

5. Try to win the amount you hoped to win in the fastest time possible. Making bets back and forth all night merely gives the law of averages a chance to perform as expected in the long run and helps Old Man Percentage slowly but surely to eat up your chances of winning.

If the Bank Craps player follows the above rules, he will be gambling intelligently; by avoiding sucker bets, his winnings may be greater. And when he does lose, his losses won't hurt him too much.

THE CASINO'S PERCENTAGE ON BANK CRAPS BETS

<i>Bet</i>	<i>Percentage in Bank's Favor</i>	<i>Bank's Take on \$5 Bet</i>
Win (pass)	1.414	\$.07*
Come	1.414	.07
Lose (don't pass) bar 6-6 or 1-1	1.402	.07
Don't come, bar 6-6 or 1-1	1.402	.07
Lose (don't pass), bar 1-2	4.385	.22
Don't come, bar 1-2	4.385	.22
Place Bets to Win		
Bank lays 9 to 5 on 4 or 10	6.666	.33
Bank lays 7 to 5 on 5 or 9	4.000	.20
Bank lays 7 to 6 on 6 or 8	1.515	.08
Box Number Bets to Win (5% Charge)		
Bank lays 10 to 5 on 4 or 10	4.761	.25
Bank lays 7½ to 5 on 5 or 9	4.761	.25
Bank lays 6 to 5 on 6 or 8	4.761	.25
Place Bets to Lose		
Bank takes 11 to 5 on 4 or 10	3.030	.15
Bank takes 8 to 5 on 5 or 9	2.500	.12
Bank takes 5 to 4 on 6 or 8	1.818	.09
Box Number Bets to Lose (5% Charge)		
Bank takes 10 to 5 on 4 or 10	2.439	.12
Bank takes 7½ to 5 on 5 or 9	3.225	.16
Bank takes 6 to 5 on 6 or 8	4.000	.20
Field Bets		
Field (2, 3, 4, 9, 10, 11, 12)	11.111	.56
Field (2, 3, 4, 9, 10, 11, 12, with double payoff on 2 and 12)	5.263	.26
Field (2, 3, 5, 9, 10, 11, 12)	5.555	.27
Big six	9.090	.45
Big eight	9.090	.45

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<i>Bet</i>	<i>Percentage in Bank's Favor</i>	<i>Bank's Take on \$5 Bet</i>
odds bet to win	.848	.04
Lose (don't pass or don't come line) plus free single point, odds bet to lose	.832	.04
Win bet (pass line) plus free double point, odds bet to win	.606	.03
Lose (don't pass) plus free double point, odds bet to lose	.591	.03

* The bank's edge on a \$5.00 wager has a plus factor which is omitted (except for the place-win bet on numbers 5 and 9, and in the box numbers 6 and 8 to lose).

Cheating at Dice

Most gambling casinos that cater to the masses are *on the square* (honest) and earn their profits by employing Old Man Percentage. The same cannot be said for thousands and thousands of private Craps games or for the countless dice games played in illegally run gambling joints. Nearly every private Craps game has either its Craps hustler (a player who offers short odds) or its dice cheat—two characters who are consistent winners in 90 percent of all friendly games.

Of course, dice specially made for cheating have been found in the tombs of ancient Egypt and the Orient, and in prehistoric graves of North and South America. Any die that is not a perfect cube will not act according to the correct odds and is called a "shape." *Shapes* are cubes that have been shaved down on one or more sides so that they are slightly brick-shaped and will tend to settle down most often on their larger surfaces. Shapes are the most common of all crooked dice and can be made either as *passers* or *missouts*.

Six-ace flats are the commonest variety of missouts, and have the six-ace sides shaved down. Thus, these sides turn up oftener than they would with square dice, and produce more sevens. The cheat bets the dice to lose.

Flat passers have had the six-ace sides cut down on one die and the three-four sides on the other, so that the points 4, 5, 9, and 10 appear more often than they should. Or the two-five sides are shaved on one die and the three-four sides on the other, so as to favor the points 5, 6, 8, and 9. The cheat bets the dice to win.

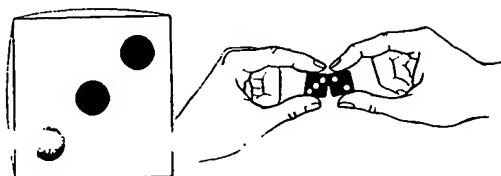
Two-way flats (fast sevens or four-way sevens) are shapes that have been shaved

down on two different sides. When a few thousandths of an inch is taken off the six and three sides, for instance, the six-ace and three-four sides are rectangles having a greater area than the two-five sides. The numbers 6, 1, 3, and 4 will appear oftener than usual and, when both dice are cut down in the same way, these numbers will combine to form 7 more often than is normal. They are, therefore, missouts, and cheaters call them *fast sevens* or *four-way sevens*. The six-ace and two-five sides, or the three-four and two-five sides, when cut down, act the same.

Bevels are shapes having one or more sides sandpapered so that they are slightly rounded rather than flat. Such cubes tend to roll off the rounded sides and come to rest more often on the flat sides. Bevels can also be made as passers or missouts as weak or as strong as desired. Use the "wobble test" to detect beveled shapes. Hold one die in each hand and rub two sides together, trying different sides. When a beveled surface is rubbed against a flat surface or another beveled surface, the dice will wobble, or rock, back and forth.

Cut edges are dice whose edges are not all beveled at the customary 45-degree angle. The four edges on some sides are cut at a 60-degree angle. This gives some sides a larger area than others, and the dice tend to settle on the larger surfaces more often. To detect cut edges, hold the dice together and note the width of the separation line between them. If this varies when you try different sides, the edges have been cut.

Loaded Dice. The *gaff* (doctoring) on shapes is called *outside work*; on loaded dice it is *inside work*. Loads may caliper as perfect cubes, but extra weight just below the surface on some sides will make the opposite sides



A beveled die and the wobble test for bevels.

come up oftener than they should. Loads, contrary to what most people think, are not so heavily weighted that the same sides always appear; this behavior in a game would look very odd indeed. Like shapes, loads are percentage dice that throw certain combinations more often than they should.

Most Craps players know so little about crooked dice that they are cheated out of millions of dollars every year because they think that transparent dice cannot be loaded. Dice makers have never found this very difficult; they simply drill the recessed spots on two or three adjacent sides of the dice a little deeper than usual. Then they insert thin gold, platinum, or tungsten amalgam slugs, which are covered by opaque paint on the spots. In a well-made pair of transparent loads, the other spots are also drilled deeper and filled with paint. Then, when you look through the dice, all the spots seem to be recessed to the same depth. In addition, many players believe that the practice of throwing the cubes against a background is protection against crooked dice. This protects you only against controlled shots, not against shapes or loads.

There are a couple of good tests for loaded dice. The best method is to fill a tall glass with water, hold the suspected cube just above the surface and drop it gently into the water; do this several times holding the die with a different number up each time. Note whether the die settles evenly or whether it



The pivot test for a loaded die.

turns over as it goes down. If it turns, and if two or three numbers always show up and others never show, then the dice are loaded.

If there is no tall glass of water handy, try this: Hold the cube loosely between thumb and forefinger at diagonally opposite corners so that there is as little pressure as possible. Try all four combinations of diagonally opposite corners. If the cube is loaded and the weighted sides are on top, the die will pivot as the heavier sides swing around to the bottom. The feeling of movement of the die is unmistakable.

Tops and bottoms are dice with one or more faces duplicated on the opposite side of each die. Since certain numbers are omitted, this will tend to produce some numbers in disproportionate frequency and never to produce certain other numbers. For example, two dice marked respectively with duplicates of 3-4-5 and 1-5-6 can never produce combinations totaling 2, 3, 7, or 12, which are the only combinations with which one can lose in the game of Craps. Such dice are usually introduced into the game by sleight of hand and, as a rule, are used only by accomplished dice cheats. Since it is impossible to see more than three sides of a cube at any one time, tops and bottoms are unlikely to be detected by the inexperienced gambler.

The Slick Dice Cup. The average player believes that the use of a dice cup protects him against dice cheats. Nothing could be further from the truth. More cheating at Craps, Backgammon, Poker Dice, Buck Dice, High Dice, and other dice games takes place when a dice cup is in use than when the dice are thrown from the hand. Why? Because it's easier to cheat and less detectable when crooked dice and a dice cup are in use. All a cheat requires to take the unsuspecting player is a *slick dice cup* and a set of two, three, four, or five loaded dice, called *first flop dice*, depending on the game being played. The cheat places the loaded dice into the crooked dice cup and the dirty work begins.

The slick dice cup has a smooth slicked inner surface and when the cheat shakes the cup with an up and down and slightly rotary motion of his arm, the loaded dice instead of rattling at random inside the cup spin around the inside surface like wooden horses on a merry-go-round. The centrifugal force lines the dice up within the cup in a horizontal position. The last sideward shake just before they are thrown causes the loaded dice to

topple over and down. When the cup is shaken, the cup parashoves it forward so that the die is turning over a number. When the same cup is used properly and good. To avoid a cup, use a *trip* in its initial tumble as the shark from a slip rim: rubber.

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topple over so that their loaded sides are down. When the cheat throws them, he holds the cup parallel with the playing surface, shoves it forward a bit and jerks it back quickly so that the dice all slide out without turning over and the cheat throws a desired number. When the other players throw using the same cup and dice, they shake and throw properly and the loaded dice do them no good. To avoid being cheated with a slick cup, use a *trip cup*, which contains obstructions in its inner surface that makes the dice tumble as they are thrown and prevents the shark from sliding them out. Some cups have a trip rim; others are lined with ribbed rubber.

If a trip cup is not available, you can insist that the dice be well shaken and that the cup be turned completely upside down on the throw so that the dice bounce on the playing surface and do not slide out. Don't hesitate to examine the dice.

Cheating with Honest Dice. There are still a great many gamblers who don't quite believe the stories about cheats who can make fair dice act like performing seals. "Can fair dice be controlled?" is a question I am often asked. The answer is "Yes," but only on certain playing surfaces. There are a good many dice cheats who have practiced long and hard and have perfected the ability to make honest dice behave as they want them to under certain conditions.

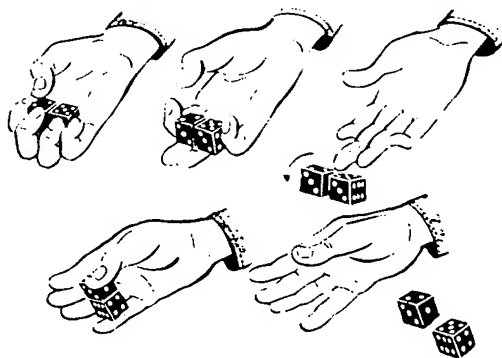
Following are five of the most effective controlled dice shots used to fleece even the most seasoned Craps players. Three of these, highly guarded dice-shark secrets, are the Backboard Control Shot, the Three-Cushion Controlled Dice Shot, and the Dice Table Control Shot. They appear here in print for the first time.

The Spin Shot or Whip Shot. Although difficult to perfect, this is the most common controlled dice shot. It works best on soft dirt. The dice are held with the desired numbers on top, rattled in the hand, but not actually shaken. A quick whiplike snap of the hand sends them spinning through the air like twin helicopters. When the dice land, the spinning motion keeps them from turning over and they settle down, the wanted numbers still on top. This shot can also be done on hard surfaces; some surfaces even help the dice to spin and slide without turning over. It can also be accomplished on the green baize surface of the bank—or open crap table—which is why casinos insist that the player hit

the backboard or throw the dice over an elastic string which is sometimes stretched across the center of the table.

The Blanket Roll. This controlled percentage shot is also called the *soft roll* or *pad roll* shot, and makes use of a blanket, soft rug, or carpet. The dice are held with certain numbers on the two sides that face each other. The cheat gives the dice a phoney shake, *à la* the spin shot described above, and as his hand comes down to make the throw, the thumb pushes the dice, still together, out toward the ends of his fingers and he gently rolls them out across the blanket. The dice land together and roll end over end like a pair of cartwheels without turning sideways. If the sixes and aces are on the hubs of the wheels, they cannot appear uppermost, therefore a crap, 11, or a 7 with a six-ace cannot be made. This is a percentage shot that seldom fails.

The Backboard Control Shot. This modern percentage controlled shot makes use of blanket, soft rug, or carpet plus a 3-foot high vertical backboard lined with foam rubber. As a rule, throwing the dice against a backboard is a protective measure against dice cheats, but not with this controlled shot. Prior to the time of releasing the dice from the hand, the cheat gives the dice a phony shake, *à la* the spin shot. Then, instead of rolling the dice on the soft surface as in the blanket roll, he lets them fly against the backboard in such a way that both dice hit the backboard at the same time causing the dice to bounce off the backboard onto the soft surface. The momentum causes them to roll back end over end like a pair of cartwheels without turning sideways. If the one-six is one hub of the wheel and the two-five is the other, the only way the cheat can seven out is with a three and four.



Two types of shots to look out for: the blanket roll (top) and the whip shot (bottom).

The Three-Cushion Controlled Dice Shot. This highly secretive private dice-game controlled throw requires the use of a 3-foot high vertical backboard and two sideboards, each lined with foam rubber. Also needed are a smooth table surface, usually a piece of linoleum, onto which the dice fall and slide to a stop. This controlled shot is very effective because few gamblers believe it is possible to hit a sideboard, backboard, and sideboard and still control the dice. To execute this fantastic dice control shot, the cheat shakes the dice *à la* the spin shot and throws the dice against the right sideboard where they ricochet off the sideboard onto the backboard and onto the second sideboard where they drop onto the smooth playing surface, finally coming to rest with the desired numbers uppermost.

The Dice-Table Control Shot. This new casino dice table control shot is the most difficult dice throw to perfect because it requires perfect aim and timing that can be gained only by long and arduous practice on a regulation casino dice table. This dice throw has taken many a casino operator for a bundle. Prior to the publication of this book, it is doubtful that more than a handful of gamblers and casino operators have had the slightest idea that such a controlled shot ever existed. And I firmly believe that once this book hits the book stands, dice-table manufacturers will make certain that it can't work on their tables.

Most modern dice tables have a sponge rubber embossed zigzag pattern lining the inside of the four 10-inch upright rails that enclose the table's playing surface. However, a bottom inch of this lining, at the juncture of the table surface and the upright rails does not possess the embossed zigzag patterns—it is plain sponge rubber. And this is exactly the spot the dice cheat must hit to control this shot.

The pickup of the dice in order to execute this controlled shot is difficult to detect because only one die has to be maneuvered into position. Immediately after the dice have been offered to the cheater-shooter, he picks them up in such a manner that one die has the desired number uppermost. This die is held palm down between the thumb and the first two fingers of the cheat's right hand flat

on the table surface. The cheat lets the dice fly out of his palm-down hand from the table surface giving the one die he wants to control a whiplike snap aiming at the juncture of the table surface and the sponge rubber sideboard. When the spinning die hits this spot of the sideboard (the bottom inch), it bounces off at an angle and drops into the center of the table without turning over, with the desired number remaining uppermost. If the cheat holds the die so that a five is always uppermost, "a hard-way 10" becomes an even bet. The same holds true for the point numbers 6, 8, or 9.

Protection Against Dice Cheats. At this point you are probably wondering if there is any simple sure-fire all-around method of making sure that the dice in the games you play are honest. I'm sorry, but the answer is "No!" Your best protection is to have the information given in this dice chapter in your head. If you are smartened up to all the methods and angles, you will have reduced your chance of being cheated with crooked cubes or a controlled dice throw to a minimum.

The only absolutely certain way of never being cheated at a dice game is not to play. But if this rule proves a little too tough to follow, you should at least take a good close look at the cubes and make sure of the following:

1. Each of the two dice in use total seven on all opposing sides.
2. All sides are level and not concave, rounded, or with raised spots.
3. All sides are equally polished.
4. The edges and corners are all straight, square, and preferably sharp rather than rounded. If rounded, see that all edges and corners are rounded equally.
5. The spots are all countersunk the same distance and the paint on all spots is the same distance from the cube's surface. Better still, use flush-spot dice.
6. The dice pass the pivot or water test for loads.
7. Whenever possible, use transparent dice.
8. If the dice cup in use is not a trip dice cup, insist that the dice be well shaken and the cup turned completely upside down on the throw so that the dice drop on the playing platform.

9. Never surface and right backt

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9. Never play dice on a blanket or soft surface and avoid turning dice against an upright backboard lined with sponge rubber.

If the dice meet the above requirements and you are able to protect yourself against the dice cheat's crooked control throws, your only worry as far as being cheated is concerned with the dice cheat whose trained fingers can switch a pair of crooked dice for an honest pair as quickly as you can say "Scarne on Dice."

SCARNE'S RULES FOR OTHER DICE GAMES

There are many parlor games using dice; game manufacturers are constantly issuing board games based on current events, politics, real estate, or on other games such as football, baseball, hockey, boxing, etc., in which dice determine the moves of the counters. Since these games are so numerous and many of them are exceedingly short-lived, the rules given here are limited to the most popular dice games currently played in carnivals, bazaars, Monte Carlo nights, gaming clubs, bars, and homes.

Most of these games have been completely neglected by previous rule book compilers and many of them first appeared in print in *Scarne on Dice*. For the first time, each game was analyzed to find out whether the game was an even-up proposition and, if not, who had the advantage. In the banking games, the percentages in favor of the banker are given.

Both the names and rules of some of these games vary in different parts of the country. The commonest method of play is the one given here, except when it is either strategically or mathematically unsound, in which case the error has been corrected. Some players do not distinguish between similar games such as Indian Dice and Poker Dice, and they play one nearly the same as the other. In these cases I have set down the methods of play that are most dissimilar.

The great majority of dice games to be found in most of the Hoyle-type game books are hundred-year-and-more-old games that are seldom played today, probably because the rules given are nearly always incomplete.

Correct Odds in Dice Games Using Two,

I have described the most-used dice cheating devices and methods, but there are still a good many others. For information on such things as the slide shot, the Greek shot, the twist shot, how to switch dice, the dice cup switch, and (with two dice) the pin gaff, heavy paint work, busters, etc., see *Scarne on Dice*, a definitive 439-page book devoted solely to dice and dice games.

Three, Four, or Five Dice. Dozens of different private and banking dice games are played today and their names and rules vary in different parts of the country. For example, some players do not distinguish between similar games such as Hazard and Chuck-A-Luck.

The great majority of these games make use of from two to five dice, and nearly all the hustler's sucker or proposition bets are made on throws of two, three, four, or five dice. They usually involve either the combined total or the appearance of one or more of several possible combinations of hands such as one pair, two pair, three of a kind, etc.

The following tables show the various combinations, the number of ways they can be made, and the odds against making them in one trial. These tables will enable the player to analyze most of the dice problems he will meet. Reference to the correct odds shown here will show whether a proposition bet is or is not a sucker bet. These odds will also enable the player to figure the house's favorable percentage in a banking game. The tables also give you the answer to odds problems that arise in other dice games.

TABLE OF COMBINATIONS AND WAYS

Two Dice		
Specific Hands and Combinations	Number of Ways	Odds Against in One Trial
One pair	6	5 to 1
A specific pair	1	35 to 1